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ABSTRACT

An innovative entrepreneurship education program was developed and delivered during summer 1998. The program was conceived by the youth program coordinator of the Butte County, California, Private Industry Council (PIC), who had been impressed by the results of a program during which the PIC hired three students from the California State University at Chico to team-teach a workplace class of 21 high school students. The lessons used in the program at the high school program were revised to include a stronger computer literacy component and focus on entrepreneurship. A team of six students from the university was trained to team-teach a series of integrated business, economic, and computer literacy lessons to 32 at-risk high school students during 3.5-hour classes that met 3 days a week for 16 weeks. The university students, who were all members of a group called Students in Free Enterprise (SIFE), also acted as mentors to the high school students. The SIFE students helped their mentees author business plans and deliver a "competitive" oral presentation to local business leaders. An end-of-program evaluation of the students' economic literacy indicated that the program increased students' knowledge of business and economic concepts. The students expressed positive attitudes about the program. (MN)

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Entrepreneurship Education for At-Risk Youth: A Successful Model for University/Business Partnerships

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Abstract

This paper describes an innovative entrepreneurship education program that was delivered to 32 at-risk youth during summer 1998. Four features make this program unique. First, a team of university students, who are members of a group called "SIFE", taught the lessons. Second, the program integrates business and computer literacy lessons. Third, the SIFE students helped their "mentees" author business plans and deliver an oral presentation to business leaders. Fourth, the program represents collaboration between California State University, Chico and the county's Private Industry Council. Results indicate that the students increased their knowledge of business and economic concepts.

Introduction

High quality entrepreneurship programs are lacking in the public school system. A recent Gallup survey found that, even though 70% of high school students want to start their own business, more than half acknowledged that their understanding of business issues is poor.

> "The sad fact is that most children today receive no formal education about business and free enterprise. Our schools aren't required to teach it and most teachers don't understand it themselves. Unless we start today to correct this situation, the free enterprise system will continue to be at risk tomorrow." (National Federation of Independent Business, 1995)

Add to this scenario the following fact: seven in 10 American business executives believe the nation's public educational system is incapable of providing them with a sufficient pool of well-educated potential employees (Raine, 1997). The polling group Yankelovich Partners in Washington, D.C. reported this finding in a recent national survey of 314 executives. The executives found enormous frustration with American education. Without reform, they fear the forces of global economic competition and increased reliance on technology will only make matters worse.

Fifty percent said high school is the weakest part of the public education system. Eighty percent said local school systems should institute academic programs that reflect the employment needs of local businesses, and they feel the focus should not be limited to improving the quality of academic education. Eighty-two percent think more attention should be paid to vocational education and trade training.

This paper describes an innovative entrepreneurship education program that addresses the above problems. The program was delivered to 32 at-risk youth during the summer of 1998. Four features

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make this program unique. First, a well-trained team of six university students, who are members of a group called Students in Free Enterprise (SIFE), taught the lessons. Second, the program integrates business, economic, and computer literacy lessons specifically focused on entrepreneurship. Third, the SIFE students helped their "mentees" author business plans and deliver a "competitive," oral presentation to local business leaders. Fourth, the program represents an exciting collaboration between California State University, Chico and Butte County. Results indicate that the students increased their knowledge of business and economic concepts, and student attitudes about the program were positive.

This program has potential to be a national model for partnerships among the university, business, and K-12 communities, primarily because the program was launched from an affiliation with the longstanding non-profit educational SIFE organization. Thus, it has a network as an automatic, natural source for dissemination.

The remaining five sections of the paper are organized as follows: Section II provides a background on how the program was created. Section III describes the entrepreneurship education program in detail, and provides empirical and descriptive results. Section IV discusses the future of the program in Butte County which, based on an Entrepreneurship Awareness and Education Grant from the Coleman Foundation, will permit us to extend the program to Butte County's Juvenile Detention Facility and to several alternative high schools. Finally, Section V provides concluding comments.

Background

The CSU, Chico SIFE team has been an official student organization since fall of 1993. The author has served at its faculty adviser all five years. SIFE is a non-profit educational organization that works in partnership with business and higher education, providing college students with opportunities to make a difference by practicing and teaching the principles of free enterprise. According to the official SIFE web page (http://www.sife.org):

> "During SIFE's 1996-97 academic year, the number of active SIFE teams grew to encompass students on over 500 college campuses across the country and beyond US borders. Students reached more than 102 million people through their free enterprise outreach programs. SIFE's philosophy is, "tell me and I will forget, show me and I might remember, involve me and I will understand." By putting students in the role of teaching others, they get a first-hand understanding of economics, management, marketing and education. Through their outreach programs, SIFE teams teach current economic issues and basic economic concepts to all ages through creative vehicles that students invent themselves."

Thus, the idea of university students completing community outreach projects related to free enterprise is not new. What makes the Chico State team unique, however, has been its emphasis on completing just a few, but very comprehensive, free enterprise education projects in the public schools. For example, prior to the 1997/98 academic year, the Chico team focused its attention on "Using Math to Make Business Decisions." This semester-long series of lessons, which were created by the author with consultation from participating teachers and SIFE students, sent teams of SIFE students to local middle schools to help at-risk math students become more receptive to applied math and technology. Over 1,300 middle school students participated in the program.

Starting in 1997/98, however, the team shifted its focus to high school students, for three reasons. First, the college students reported that they could relate better to high school students. Second, high school teachers in community high schools sought out SIFE's services. The third reason relates to California's new welfare-to-work legislation (called CALWORKS). With the new laws, there is a much more

pressing need in our county to provide workplace literacy skills for those students who, in all likelihood, were not going to college.

The author then revised the middle school lessons during summer 1997. Starting fall 1997, a new series of lessons were rolled out to Ridgeview High School, a continuation school in nearby Magalia, California. Three SIFE students were hired by the Butte County Private Industry Council to "team-teach" a class of 21 students (the majority of whom were teen mothers). Each Monday, Wednesday, and Friday, from September through March, the SIFE students taught the lessons in one-hour sessions. The lessons were aptly called "Ridgeview SIFE: Turning Risk into Success."

The Entrepreneurship Program: Details and Assessment

Based on the success of the Ridgeview project, the Butte County Private Industry Council wanted SIFE to become part of its Summer Youth Employment Program (SYP). Before describing the details of the program, a description of PIC and its SYP is helpful.

Private Industry Council

The Private Industry Council (PIC) of Butte County is a private non-profit agency that is steered by a governing board made up of representatives from local businesses, education, the state of California's Employment Development Department (EDD), and the Department of Rehabilitation. It is funded by Job Training Partnership Act (JTPA), which is administered by the U.S. Department of Labor.

The Youth Program Coordinator for PIC, Kathy Lowdermilk, assessed the Ridgeview project. Based on her findings, she contacted the author about creating a summer program using a revised version of the Ridgeview lesson plans to be used for a summer "at-risk youth/employment program." The revised lessons, she indicated, would be enhanced if they contained a stronger computer literacy component.

"Summer Sife": A Model Program

Lowdermilk and the author met several times during spring of 1998 to lay the groundwork for the summer program, called "Summer SIFE: Turning Risk into Success." The author became the project director of a grant from PIC to the university. The author, working closely with Lowdermilk, then revised the Ridgeview lessons. These lessons required extensive revamping, because the Ridgeview lessons had been delivered three days a week over 16 weeks, for one hour each session. The summer lessons, on the other hand, needed to be written for a 40-day time, with 3.5 hours per session.

In May, six SIFE students were recruited from the 1997/98 SIFE team. During the week of June 8-12, the author trained the students, and the program officially began June 15. Meanwhile, Lowdermilk recruited eligible youth to the program and arranged for the program sites in each city. Additional details of the program included:

- **Three Sites:** Chico, Paradise, and Gridley (all in Butte County). Each site contained a computer lab with at least 10 Pentium computers.
- **Number of Youth at Each Site:** Between four to eight students were assigned to each class.
- **Student Profile:** To be eligible for the program, students needed to be 16-21 years old, and come from a family with a minimum income level.

- **Number of Summer SIFE Classes:** There were a total of six classes: two in Chico (one in the morning and one in the afternoon). The same was true in Gridley and Paradise. The morning sessions were held between 8:00-11:30; the afternoon sessions were conducted between 1:00-4:30.

- **Employment Experience:** The students were employed for 7.5 hours each day. When not in the Summer SIFE class, they were assigned a work site at a local non-profit agency. The goal was each day was to combine 4 hours of employment experience with 3.5 hours in the Summer SIFE program

- **SIFE Mentors/Instructors at Each Site:** Working as a team, two SIFE students were assigned to each site.

- **Compensation from PIC:** PIC funds were used to pay the participating students the minimum wage of $5.75 an hour; SIFE instructors were paid $8.65 per hour. The project director was paid through the CSU, Chico Office of Research and Sponsored Projects by a grant from PIC.

- **Oral Presentation:** At the end of the program, each class came to Chico to make an oral presentation of their hypothetical business plans to a panel of judges. The best business plans/presentations were awarded prize money from the CSU, Chico SIFE team.

Figure 1 provides a list of the entrepreneurship lessons. Five main aspects of the lessons set them apart from extant curricular materials. First, business, economics, computer, math, writing, and presentation skills were *integrated* throughout the lessons. For example, students constructed spreadsheets in order to complete pro forma financial statements that were inserted into their business plans.

Second, the lessons were designed to move away from the traditional rule-based, procedure-oriented mode to a more dynamic, interactive learning mode. The new mode views the learner as an active information processor who uses data, exercises judgments, evaluates risk, and solves real-world problems.

Third, the project culminated in a group "business plan" that was presented to a panel of judges that consists of university business students and faculty, business leaders, and representatives from PIC.

Fourth, the program emphasized computer skills. Throughout the program, students were taught the following computer skills: word processing, spreadsheets, presentation software, email, digital imaging, electronic conferencing on the Internet, and using the World-Wide Web as a research tool.

Last, outcomes assessment was a key component. Two "knowledge" tests were administered to students on a pre- and post-test basis (see Appendix A for a list of these questions). The first test was a 10-question instrument created by the National Council on Economic Education, founded in 1949 to promote the teaching of sound economics to school children. The NCEE claims that every graduating high school student should be able to answer every question correctly (in 1992 American adults scored an average of 39%; college graduates scored 51%). This test measures economic literacy gain. The second test was a 15-question business literacy quiz that was constructed by the author.

In addition to the economic and business literacy quizzes, an attitude survey was administered at the end of the program. The instrument, which contained 29 questions, asked students about their assessment of various lessons, use of active learning techniques, evaluation of certain exercises/activities, effectiveness of the mentors, and various qualitative factors. The next section provides the results of our assessment procedures.

Figure 1
A List of the 22 Lessons in our Summer SIFE Program

Lesson Number	Academic Lesson Title	Date
Lesson 1	Welcome to Free Enterprise	June 16
Lesson 2	Economics 101: Relating Your Business (Microeconomics) to a Global Economy (Macroeconomics)	June 17-June 23
Lesson 3	Entities, Valuation Rules, and Ethics	June 25-26
Lesson 4	The Stock Market-Part I	June 29-30
Lesson 5	Keeping Track of Personal Net Worth: The Case of Terri's Spreadsheet	July 1
Lesson 6	Two Business Plan Examples: CarCare and Ridgeview Snack Bar	July 3
Lesson 7	Sole Proprietorship: The Simplest Business Form	July 6
Lesson 8	The "Big Three" Financial Statements	July 7
Lesson 9	Starting Your Own Business: Questions and Answers	July 8
Lesson 10	Comparing "Annette's Tutoring Services" to "Larry's Lawn Service" (Rough Draft of Business Plan is Due Today)	July 9
Lesson 11	Estimating Revenues, Expenses, and Profits	July 10
Lesson 12	Mary and Tina's Child Care Services	July 13-14
Lesson 13	Keeping Good Records: Service Companies and Retail Companies The Case of Billy's Sports Cards (Final Draft of Business Plan Due Today)	July 15-16
Lesson 14	Risk and Reward: The Two-Dice Experiment	July 17
Lesson 15	The Columbus/Isabella Partnership	July 20-21
Lesson 16	"Jenny's Jewelry" Pays Its Taxes	July 22-23
Lesson 17	Tax Dollars and Horse "Sense": Reining Government Debt	July 27-28
Lesson 18	Ethical Decision Making: The Case of "Andi's Peace of Mind"	July 29
Lesson 19	Einstein's Second Greatest Theory: The Time	July 30

	Value of Money	
Lesson 20	Monopoly Simulation	July 31
Lesson 21	The Stock Market-Part II	Aug. 3-4
Lesson 22	Want a Loan From the Bank? Consider the Five C's	Aug. 5

Outcomes Assessment Results

Knowledge Tests: The methodology we used to test for increased knowledge of business and computer literacy is called the *McNemar test.* This is a non-parametric test of distributions by categories of two related samples. This test is appropriate when the researcher wants to analyze category changes by individuals following some event (Siegal, 1956). For our Summer SIFE project, we wanted to determine whether our business and economic literacy curriculum, delivered by pairs of university mentors, was effective. In particular, we wanted to know if there was a change in the number of students correctly answering the "business and economic literacy" questions after the summer was over. The steps required to do this were:

1. Establish the null hypothesis that the Summer SIFE had no effect on helping students answer the question correctly.
2. Place the observations in a 2 x 2 contingency table as the following:

		After Summer SIFE	
		Wrong Answer	Correct Answer
Before Summer SIFE	Correct Answer	A	B
	Wrong Answer	C	D

3. Make sure that the sum of the expected values (E) in cells A and D under the null hypothesis of no difference is larger than 5. The calculation is:

$E = .5(A + D)$

4. Normally, we would calculate the Chi-square value as follows:

$X^2 = (/A-D/ - 1)^2 / (A + D)$ with 1 degree of freedom

However, because of the small sample size (e.g., fewer than 25 cases have different values for the two variables), the binomial distribution is used to compute the significance level.

Table 1 provides results of the (1) economics literacy quiz and the (2) business literacy quiz. Panel A provides results of the 10-question economics literacy quiz. Here, the students showed significant improvement on six of the 10 questions using a .05 alpha level. Using a .10 alpha level, significant improvement is shown for three additional questions.

Panel B presents the results of the 15-question business literacy quiz. Here, we see that the students performed significantly better on eight of the 15 questions, using an alpha level of .05. If one sets the

alpha level to .10, three additional questions would be deemed significant.

Table 1: Results of McNemar Test

Panel A: Economic Literacy

Question	Significance Level	Significance
1. Opportunity cost	<.001	***
2. GDP vs. GNP vs. CPI	<.001	***
2. Definition of the GDP	.388	N/S
3. Productive resources	.003	***
5. Definition of profit	.057	**
6. Real vs. nominal interest/inflation	.065	**
7. Unexpected inflation	<.001	***
8. Foreign currency fluctuations	.022	***
9. International trade	.070	**
10. Economic output constraints	<.001	***

Panel B: Business Literacy

Question	Significance Level	Significance
1. Accounting equation	<.001	***
2. Balance sheet	.118	N/S
2. Net income vs. cash	.070	**
3. Equity/Net worth	<.001	***
5. Profitability/Ratio analysis	<.003	***
6. Income statement	.063	**
7. Borrowing/deficits/debt	.118	N/S
8. Dow Jones Industrial Average	<.001	***
9. Transaction effect on financials	<.002	***
10. Entity concept/financial statements	1.000	N/S
11. Importance of business plan	.077	**
12. Income statement/net income	<.022	***
13. Components of a business plan	<.001	***
14. Transaction effect on financials	.302	N/S
15. Compound interest	<.001	***

*** Very significant <.05
** Significant; <.10
N/S Not significant
N = 26 students

Thus, the overall results show that, as a group, significant improvement (alpha = .10) occurred on 20 of the 25 questions.

Table 2 provides results on the exam *by individual* student. Note that the average score on the 25-question pre-test was 37.5%. Compare this to the average score on the post-test of 64.4%. In absolute terms, this is an average percentage increase of 26.9%. However, a 26.9% increase from a 37.5% base represents an increase of 72%. Also, given that college graduates scored only 51% on a very similar exam, it is fair to conclude that the Summer SIFE program is successful, as far as knowledge gains. Next, we turn to attitudes.

Attitudes Test: Table 3 provides a copy of the attitudes survey, along with the average score for each question. The survey contains five sections: (1) quality of the lessons in teaching about business, ethics, technology, communication skills and entrepreneurship; (2) active learning; (3) evaluation of specific exercises and activities; (4) importance of various tasks involving computers and group assignments; and (5) qualitative factors about how the program affected the students' future.

(1) Quality of the lessons - All nine questions were rated between the effective to excellent scales. The

two most positive responses related to how well the SIFE students taught how businesses operate (4.42), and how successful the SIFE students were in teaching the skills and motivation needed to succeed in a global marketplace (4.39). There was a three-way tie for third place how well the team taught the concept of profit and loss; how well the team taught business ethics; and how well the SIFE students taught the meaning of entrepreneurship (4.38).

Table 2: Individual Student Performance
Economic and Business Literacy Quizzes

Chico: A.M.

Student Name	Pre-Test: Econ. and Bis. Lit	% Correct (out of 25)	Post-Test: Econ. and Bus. Lit	% Correct (out of 25)	% Increase
JC-MALE	13	52%	22	88%	36%
JK-MALE	7	28%	20	80%	52%
AR-Female	13	52%	23	92%	40%
TM-Female	12	48%	21	84%	36%
JM-Male	6	24%	17	68%	44%
CW-Male	17	68%	24	96%	28%

Chico: P.M.

Student Name	Pre-Test: Econ. and Bus. Lit	% Correct (out of 25)	Post-Test: Econ. and Bus. Lit	% Correct (out of 25)	% Increase
AH-Male	13	52%	24	96%	44%
AR-Female	7	28%	23	92%	64%
LX-Male	13	52%	23	92%	40%
MH-Female	12	48%	24	96%	48%
JM-Male	6	24%	25	100%	76%
NR-Male	17	68%	25	100%	32%

Gridley: A.M.

Student Name	Pre-Test: Econ. and Bus. Lit	% Correct (out of 25)	Post-Test: Econ. and Bus. Lit	% Correct (out of 25)	% Increase
MG-Female	7	28%	13	52%	24%
LC-Female	7	28%	12	48%	20%
JR-Female	8	32%	12	48%	16%

Gridley P.M.

Student Name	Pre-Test: Econ. and Bus. Lit	% Correct (out of 25)	Post-Test: Econ. and Bus. Lit	% Correct (out of 25)	% Increase
JV-Male	3	12%	17	68%	56%
VS-Female	10	40%	11	44%	4%
GR-Female	8	32%	7	28%	-4%

Paradise: A.M.

Student Name	Pre-Test: Econ. and Bus. Lit	% Correct (out of 25)	Post-Test: Econ. and Bus. Lit	% Correct (out of 25)	% Increase
AA-Female	11	44%	25	100%	56%
KH-Female	8	32%	16	64%	32%
JH-Male	7	28%	15	60%	32%
TT-Male	13	52%	17	68%	16%

Paradise: P.M.

Student Name	Pre-Test: Econ. and Bus. Lit	% Correct (out of 25)	Post-Test: Econ. and Bus. Lit	% Correct (out of 25)	% Increase
RA-Male	8	32%	16	64%	32%
SK-Male	8	32%	14	56%	24%
AR-Male	14	56%	17	68%	12%
JW-Male	13	52%	22	88%	36%

Overall (n = 26 students)

	Pre-Test: Econ. and Bus. Lit	% Correct (out of 25)	Post-Test: Econ. and Bus. Lit	% Correct (out of 25)	% Increase
Average	9.4	37.50%	16.1	64.40%	26.90%

Table 3
Results: Attitude Survey (n=24)

The SIFE team delivered several lessons over the past three months. Please answer the following questions, on a scale of 1 (poor) to 5 (very well).

Poor=1; Neutral=2; Adequate=3; Effective=4; Excellent=5

Question 1: Overall, how well did the SIFE students teach you how businesses operate? = 4.42

Question 2: How well did the lessons help you identify a market need for a product or service and how to meet that need? 4.25

Question 3: How well did you learn how to produce a product or service? = 4.13

Question 4: How well did the team teach you the concept of profit and loss? = 4.38

Question 3: How well did the team teach you about business ethics? = 4.38

Question 6: Overall, how successful were the SIFE students in teaching you the skills and motivation needed to succeed in the global marketplace? = 4.39

Question 7: How well were technology skills taught during the project? = 4.21

Question 8: How well were communication skills integrated throughout the lessons? = 4.08

Question 9: How well did the students teach you the meaning of entrepreneurship? = 4.38

Active Learning

This course continually placed you in the "active learning mode" in which you were frequently asked to perform certain tasks, individually and in groups. Please indicate for each item whether it was very important, unimportant, neutral, important, or very important in helping you learn the course materials.

Very Unimportant = 1; Unimportant = 2; Neutral = 3; Important = 4; Very Important = 5

Question 10: Work in small groups in class. = 3.63

Question 11: Prepare written reports (business plan, ethics essays). = 4.00

Question 12: Completing the computer lessons. = 4.25

Question 13: Make oral presentations. = 3.67

Evaluation of Exercises/Activities
Question 14: Of all the item below, rank your first, second, and third favorite activities.

5 = Preparing spreadsheets to make financial statements
6 = Playing with the dice
1 = Voting in the penny experiment
10 = Making oral presentations with PowerPoint
1 = Writing an essay describing an ethical dilemma
4 = Playing the "An Income of Her Own" board game
11 = Starting your own business
13 = Playing Monopoly
6 = Keeping track of stocks
1 = Writing an essay describing an ethical dilemma
14 = Using the Internet to do research

(Note: numbers to the left indicate the total number of first, second, and third place votes this activity received).

Question 15: Same as 14, except list your three *least favorite activities* from the same list. *(The three least favorite activities were preparing spreadsheets, preparing oral presentations, and writing an ethical essay-each received eight first, second, and third place votes)*

Importance of Various Tasks

The SIFE mentors who worked with you during this project performed several tasks that are described below. Please indicate for each item whether it was very important, unimportant, neutral, important, or very important in helping you learn the course materials.

Very Unimportant = 1; Unimportant = 2; Neutral = 3; Important = 4; Very Important = 5

Question 16: Provided training using spreadsheets. = 4.33

Question 17: Provided training using PowerPoint software. = 4.29

Question 18: Provided training using word proc. software. = 4.35

Question 19: Provided trng. using MMerge features in Word. = 4.04

Question 20: Provided training using the World Wide Web. = 4.21

Question 21: Consulted with students during group assignments. = 4.42

Question 22: Provided responses over the phone/e-mail to student inquiries. = 3.90

Qualitative *Factors-SIFE Project*

As a result of participating in the Summer SIFE program, have you experienced a decrease, no change, or increase in each of the following qualitative indicators.

Decrease = 1; No Change = 2; Increase = 3

Question 23: As a result of the Summer SIFE program I think my personal income in the future will 2.96 ?

Question 24: As a result of the Summer SIFE program, I think there has been a(n) 2.67 in my self-esteem?

Question 25: As a result of the Summer SIFE program, I think there has been a(n) 2.75 in my career options.

Question 26: As a result of the Summer SIFE program, I think there has been a(n) 2.92 in my work skills.

Question 27: As a result of the Summer SIFE program, I think there has been a(n) 2.75 in my potential for success.

Question 28: As a result of the Summer SIFE Program, I think there has been a(n) 2.63 in my time management skills.

Question 29: As a result of the Summer SIFE program, I think there has been a(n) 2.58 in my independence.

(2) Active Learning - Table 3 shows that students clearly enjoyed completing the computer assignments, ranking it 4.25 on a scale of one to five

(3) Evaluation of Exercises/Activities - Several active learning activities were integrated throughout the lessons. The three favorite activities included playing the board game Monopoly (13 votes ranking first, second, or third), starting their own hypothetical business (11 votes), and making oral presentations with PowerPoint (10 votes). The three least favorite activities, each receiving eight votes ranking first, second, or third, included preparation of spreadsheets, making oral presentations with PowerPoint, and writing an essay about business ethics.

(4) Importance of Various Tasks Performed by the SIFE Mentors - All but one of the questions rated above a 4 on a five-point scale. The students rated consulting with SIFE students during group assignments as a 4.42. Next, they rated computer training quite highly: word processing (4.35),

spreadsheets (4.33), PowerPoint (4.29), and World Wide Web skills (4.21).

(5) Qualitative Factors - The most striking result here is that, on a three-point scale, the average response was a 2.96 to the question, "As a result of the Summer SIFE program, I think my personal income in the future will increase. Also, students believed that their work skills had increased (2.92), their career options had increased (2.75), and their potential for success had gone up (2.75).

In summary, assessment results are positive. Results show an increase in business and economic literacy, both as a class and individually. Also, the students report overall satisfaction with the program.

The Future of the Program

The future of the entrepreneurship education program is optimistic, both locally and nationally. Locally, the CSU, Chico SIFE team has received a $25,000 grant from the Coleman Foundation under its Entrepreneurship Awareness and Education Grant Program. The purpose of the grant is to extend the entrepreneurship program to additional, at-risk high school students. Starting in the fall of 1998, the lessons have been revised and are being delivered to four "alternative" high schools. The lessons are also being delivered to students detained in the Butte County Juvenile Detention Hall.

Second, the CSU, Chico SIFE team aggressively recruits other colleges and universities to start SIFE chapters. They also work with existing SIFE chapters. So far this year, the team has adopted three "rookie" campuses within the CSU system as part of its "Adopt-a-Rookie SIFE Team Program." The fellow CSU schools are: Bakersfield, Cal Poly San Luis Obispo, and Sacramento State. It has also adopted the University of Idaho.

In addition to helping new SIFE chapters get started, the CSU, Chico team has adopted 19 "sister" veteran teams around the U.S. These universities are encouraged to share successful projects with one another. As part of the program, the Chico team urges all adopted rookies and sisters to consider adapting the Summer SIFE lessons.

Another reason this program has a bright future is the increasing popularity of "active learning" as an innovative pedagogy in Colleges of Business. In fact, the American Accounting Association has recently created a separate Active Learning Committee within its Teaching and Curriculum section. This section, which currently boasts over 1,700 accounting faculty, also encourages "experiential learning" activities within its domain. According to the National Society of Experiential Education's home page (http://www.nsee.org/), experiential education "encompasses a wide range of teaching and learning methods which engage the learner actively in whatever is being learned." Examples include:

- internships
- school-to-work
- career development
- cross-cultural education
- leadership development
- active learning in the classroom
- service-learning

Comparing the Summer SIFE program to the list above, we see that the compensated SIFE instructors are paid interns. By working with the at-risk mentees (half of whom are Latino or Asian), the college students obtain leadership skills. They also learn to work with students from different cultures. The mentees, concurrently, obtain school-to-work skills; they have a chance to obtain career skills; and they

engage in active learning in the classroom. Starting this fall, SIFE students who are not compensated from the Coleman grant will serve voluntarily. This concept of college students completing community service projects that are related to school coursework is known as "service learning. " This term is defined is more specifically as "a credit-bearing educational experience in which students participate in an organized service activity that meets identified community needs and reflect on the service activity in such a way as to gain a further understanding of course content, and an enhanced sense of civic responsibility." (Bringle and Hatcher, 1995). Unlike extracurricular voluntary service, service learning is a course-based service experience that produces the best outcomes when meaningful service activities are related to course material through reflection activities as directed writings, small group discussions, and class presentations. All SIFE students (both paid students and volunteers) are all eligible to earn one unit of *graded* credit this year by participating in the entrepreneurship program (the author will provide copies of the syllabus, and an outline of the lessons, upon request).

Last, the program has great potential for students in grades K-8, and for adult education and training programs. In fact, the CSU, Chico SIFE team, in previous years, has delivered a series of lessons to pre-algebra eighth graders called "Using Math to Make Business Decisions." Also, starting last year, the team has begun working with gifted and talented students in grades 3-8. The challenge right now is to recruit enough students, organize them, and train them to handle the growing demand from the community.

Concluding Comments

If we are serious about addressing the problems of economic, business, and computer literacy, it is imperative that today's high school students are literate in these areas. Unfortunately, though the trend is changing as older teachers retire, many teachers themselves are not literate in the language of business or computers. Currently, there are over 30,000 SIFE students nationwide who have great knowledge and skills that can be used. Equipped with the necessary knowledge, skills, training, hardware and software, these mentors can provide high school students with access to an integrated curriculum using new technology. If the teachers become actively engaged as facilitators on the days when the SIFE team comes to the campus, then these same teachers can receive an indirect form of "in-service" training. At the same time, SIFE students planning on careers in business can improve leadership, teamwork, and communication skills. Also, for those SIFE mentors planning to become K-12 teachers (especially those that can be recruited from the College of Education), this experience would provide from in valuable pre-service training.

The benefits do not accrue only to the population served. There are also many benefits to the college students themselves. Rather than repeat a laundry list of the most obvious benefits, it is fitting to close with the words of one of the SIFE student instructors:

> "I have taken courses in college related to the subject matter that I taught in Summer SIFE, but having the opportunity to teach the material gave me a greater understanding of business in general. I have also learned to be patient with others and it has made me realize how difficult teaching can be. It has helped me with my public speaking skills and given me more drive to exceed in life."

Appendix

Economic Literacy Exam

(The following questions were taken from the National Council on Economic Education Economic IQ

Test. The NCEE claims every graduating high school student should be able to answer every question on this list correctly.)

Question 1: The town of Bedford Falls wants to buy four new police cars. The opportunity cost of buying the police cars is the:
a. Cost of buying the cars now versus buying them later.
b. Ability to make more arrests and reduce the total annual crime rate.
c. Cost of other desirable goods or services that must be given up to buy the cars.
d. Dollar cost of the new cars.

Question 2: The best measure of an economy's performance, as measured by final goods and services produced within a country's borders, is:
a. Gross National Product (GNP)
b. Gross Domestic Product (GDP)
c. The unemployment rate
d. Consumer Price Index (CPI)

Question 3: Gross Domestic Product (GDP) is a measure of:
a. the total market value of all final goods and services produced in one year within a country's borders.
b. the total market value of all final goods and services produced in one year by a country, both inside and outside its borders.
c. the price level of all goods and services sold in one year within a country's borders.
d. the total amount of goods and services produced by private companies in one year.

Question 4: The three major productive resources are natural resources, human resources and capital goods. Which best illustrates these three productive resources, respectively:
a. Rent, workers and money.
b. Iron ore, taxi drivers and bonds.
c. Farmers, importers and exporters.
d. Oil, engineers and drills.

Question 5: The best definition of profit is:
a. Total assets minus total liabilities.
b. Total sales minus total taxes.
c. Total revenues minus total costs.
d. Total sales minus total wages.

Question 6: If your annual money income goes up 10 percent, while the prices of what you buy go up 20 percent, then:
a. Your real income has risen.
b. Your real income is unchanged.
c. Your real income has fallen.
d. You're shopping in the wrong stores.

Question 7: Who would benefit from an unexpected 10% inflation rate?
a. Sam, who has $5,000 in a savings account.
b. Maria, who has a $5,000 life insurance policy.
c. John, who loaned Bonnie $5,000 last year.
d. Bonnie, who borrowed $5,000 from John and must pay it back this year.

Question 8: Who would benefit if the U.S. dollar becomes stronger against the Japanese yen?
a. A Japanese company selling products in the U.S.
b. A U.S. company buying a building in Japan.
c. A U.S. tourist taking a two-week vacation in Japan.
d. All of the above.
e. None of the above.

Question 9: Nation A grows bananas. Nation B produces cheese. If they exchange bananas and cheese:
a. Nation A gains; Nation B loses.
b. Nation B gains-, Nation A loses.
c. Both nations lose.
d. Both nations gain.

Question 10: The limit of the economy's real output at any time is set by:
a. The quantity and quality of human and natural resources and capital goods.
b. The total amount of money, stocks and bonds in circulation.
c. Business demand for goods and services.
d. The amount of government spending and taxes.

Business Literacy Exam

Question 1. What is the "accounting equation?"
A. revenues - expenses = net income
B. balanced expenses = expenditures + revenues
C. interest = principal rate * time
D. assets = liabilities + equity

Question 2. The primary purpose of the balance sheet is to show:
A. That a business's financial records balance as of a particular date.
B. How a business's resources, and claims to those resources, changed over a particular period.
C. That the sum of a business's debits equals the sum of its credits at a particular point in time.
D. The assets owned by a business entity as of a particular date, as well as how these assets have been financed: by liabilities and by equity.

Question 3. True or False. In business, net income is the same as cash.

Question 4. A company's *equity is* another name for its:
A. Net worth
B. Combined value
C. Total assets
D. Ethical behavior

Question 5. A company's "profit margin" ratio is determined by dividing:
A. Gross sales revenue by net sales revenue.
B. Net income by total revenues.
C. The company's net worth by the difference between its assets and liabilities.
D. Total liabilities by total assets.

Question 6 True or False An income statement shows whether or not a company is operating profitably.

Question 7. What do we call it when a business's revenues aren't enough to pay all expenses, and it then has to borrow money to make up the difference?
A. Creative financing
B. Debt loading
C. Deficit spending
D. Off balance sheet financing

Question 8. Which of the following is not true?
A. The Dow Jones Industrial Average is used by the government to calculate a business's income tax.
B. The Dow Jones Industrial Average is one of the statistics computed by the *Wall Street Journal.*
C. The Dow Jones Industrial Average provides an overall glimpse of how the stock market performed on any given day.
D. The Dow Jones Industrial Average is calculated by referring to the ending market prices of 30 major U.S. companies.

Question 9. Assume George's banker asked him to compute net income, but he forgot to compute income tax expense. He also forgot to pay his taxes! Which of the following is true about his financial statements?
A. Total assets would be too low.
B. Total liabilities would be too high.
C. Net income would be too low and total assets would be too high.
D. Cash would be too high and net income would be too high.

Question 10. When a customer makes a withdrawal from her savings account at the bank, what effect does this transaction have on the *bank's* financial statements?
A. Cash decreases and liabilities decrease.
B. Revenues decrease.
C. Expenses increase.
D. Answers (A) and (C) are both correct.

Question 11. Which of the following is not a key reason for a business owner to write a business plan?
A. Bankers often require a business plan in order to make a loan to a business.
B. The business plan provides details about the mission, goals, short-term, and long-term objectives for the business.
C. The Internal Revenue Service requires that business owners file a business plan along with its annual income tax return.
D. The plan should give everyone in the business a direction and means to chart the business's progress.

Question 12 is based on the following information:
On January 1, 1997, Ken Derucher formed a sole proprietorship called "Ken's Delivery Service." Ken, who is employed full-time at another company, plans to devote weekends to his new business venture. Here's what happened on January 1, 1997:

Ken made a $5,000 equity contribution from his personal savings account to start the business; During the year:

- Cash sales revenue was $25,000.
- Operating expenses paid in cash were $12,000.
- Tax expenses paid at December 31 were $3,000.
- He withdrew $6,000.

Question 12. If Ken's banker asked him to compute net income for 1997, what would your answer be?
A. $14,000
B. $13,000
C. $10,000
D. $8,000

Question 13. Which of the following is not one of the five "P's" of a good business plan?
A. Personality
B. Product
C. Place.
D. Projected financial information
E. Promotion

Question 14. When an owner makes a withdrawal of cash from the business, what happens to the balance sheet?
A. Assets go up and equity goes down
B. Equity goes up and assets go down
C. Assets go down and equity goes up
D. Assets go down and equity goes down

Question 15. If you put $200 in the bank today, how much will it be worth in three years, assuming the bank pays you 4% interest and "compounds" interest each year?
A. $1 87.69
B. $224.00
C. $224.97
D. $226.89

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